

Semisolid IMRV HiVeg™ Medium Base**MV1427**

Semisolid IMRV HiVeg Medium Base is used for simultaneous enrichment as well as isolation of motile *Salmonella* from other competitive organisms.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	13.5
HiVeg peptone	13.5
Saccharose	7.5
Lactose	0.5
Ammonium ferric sulphate	0.2
Sodium thiosulphate	0.8
Potassium dihydrogen phosphate	1.47
Magnesium chloride	10.91
Malachite green	0.037
Bromo cresol purple	0.08
Agar	2.7

Final pH (at 25°C) 5.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 51.2 grams in 1000 ml distilled water. Heat with stirring to dissolve the medium completely. DO NOT AUTOCLAVE / DO NOT OVERHEAT. Cool to 45°C and aseptically add rehydrated contents of 1 vial of IMRV/ RV Selective Supplement (FD193). Mix well and pour into sterile petri plates.

Note: The motility of *Salmonellas* can be drastically reduced when the agar surface becomes too dry. Hence the plates should be well dried before use. If visible moisture occurs on the lid of the plates or the surface of agar, it must be removed. While incubation, incubate the plates aerobically in an upright position for no longer than 24 hours at 42°C.

Principle and Interpretation :

This medium is prepared by using HiVeg hydrolysate and HiVeg peptone in place of Casein enzymic hydrolysate and Peptic digest of animal tissue respectively, making the medium free of BSE/TSE risks. Semisolid IMRV HiVeg Medium Base is used for simultaneous enrichment and isolation of motile *Salmonella* from food and environmental samples. This medium, like the conventional medium is a diagnostic medium distinguishing motile *Salmonella* from non motile forms (1, 2). Also *Salmonella* can be identified from a mixed culture of different gram negative organisms. Addition of Novobiocin as a supplement and malachite green in the medium selectively inhibits most gram-positive organisms. *Salmonella* generally survives a little high osmotic pressure (due to MgCl₂ (magnesium chloride) in the medium), grows at slightly low pH and are resistant to malachite green compared to other bacteria. Saccharose, Lactose and Bromocresol purple differentiates *Salmonella* from lactose and saccharose (sucrose) fermenting organisms. Ammonium ferric sulphate and Sodium thiosulphate are indicators of H₂S (hydrogen sulphide) production. Thiosulphate is reduced to this H₂S by several

Product Profile :

Vegetable based (Code MV)Ⓞ	Animal based (Code M)
MV1427 HiVeg hydrolysate HiVeg peptone	M1427 Casein enzymic hydrolysate Peptic digest of animal tissue

Recommended for : Simultaneous enrichment as well as isolation of motile *Salmonella* from other competitive organisms.

Reconstitution : 51.2 g/l

Quantity on preparation (500g) : 9.76 L

pH (25°C) : 5.5 ± 0.2

Supplement : IMRV / RV Selective Supplement (FD193).

Sterilization : Boiling (DO NOT AUTOCLAVE)

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

species of bacteria and H₂S then combines with ferric ions to produce the insoluble black precipitate of ferrous sulphide as indicated by formation of greyish black colour at the centre of the colony.

Quality Control :**Appearance of powder**

Light yellow coloured, may have slightly opalescent tinge, homogeneous, free flowing powder.

Gelling

Semisolid, comparable with 0.27 % Agar gel.

Colour and Clarity

Dark green coloured, clear to slightly opalescent semisolid medium forms in petriplates.

Reaction

Reaction of 5.12 % w/v aqueous solution is pH 5.5 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 42°C for 18-24 hours, when one drop of culture is inoculated in the center of the medium plate.

Organisms (ATCC)	Inoculum (CFU)	Growth	Motility
<i>Citrobacter freundii</i> (8090)	10 ² -10 ³	inhibition	-
<i>Pseudomonas aeruginosa</i> (9027)	10 ² -10 ³	inhibition	-
<i>Salmonella</i> serotype Typhimurium (14028)	10 ² -10 ³	good	+ *

Key : * = development of purple halos of growth originating from the inoculation spot.

References :

- Vander Zee H, and Van Netten P. 1992 Proc. Symp. "Salmonella and Salmonellosis". Ploufragan ; 69.
- Puzickova, V; Karpiskova, R. and Pakrova, E. 1996. Vet Med. Praha. 41 (9): 283-288.